

Claims

1. A shower head having
  - 1.1 a housing,
  - 1.2 a disk (27) from which jets exit that has
    - 1.2.1 numerous apertures (30) from which jets exit,
  - 1.3 a water inlet for admitting water to the housing, and
  - 1.4 an aerator for aerating water flowing through the shower head.
2. A shower head according to claim 1 having a means (a perforated disk (60)) for forming several water jets.
3. A shower head according to claim 2, wherein the aerator is configured such that it aerates water upstream from the means for forming jets.
4. A shower head according to claim 2 or claim 3, wherein the means for forming jets and/or the aerator is/are configured such that individual water jets will be aerated jointly and/or severally.
5. A shower head according to any of the foregoing claims having guides for guiding the aerated water jets to the apertures (30) from which jets exit, over the entire jet disk (29).
6. A shower head according to any of the foregoing claims, wherein the guides and/or the aerator are configured such that they generate turbulence in the aerated jets.
7. A shower head according to any of the foregoing claims, wherein the aerator is configured such that it generates discrete aeration jets.

8. A shower head according to claim 7, wherein every aeration jet is coordinated to a water jet.
9. A shower head according to any of claims 2 - 8, wherein the means for forming jets has a perforated disk (60).
10. A shower head according to any of the foregoing claims, wherein the aerator has a hub (64) that has at least one radial air conduit in the vicinity of that end thereof that faces the interior of the housing.
11. A shower head according to claim 10, wherein the aeration hub has on its exterior essentially axially arrayed guides (71, 171) for guiding the discrete aerated jets.
12. A shower head according to claim 11, wherein the jet guides (171) on the exterior of the aeration hub (168) are inclined.
13. A shower head according to any of claims 5 - 12, wherein the guides have deflectors arranged on the base of the aeration hub (64).
14. A shower head according to claim 13, wherein the deflectors are angularly offset from the radial direction, if necessary, curved in the plane of the jet disk (27).
15. A shower head according to any of claims 5 - 14 having guides on the rear face of the jet disk and/or the front face of the rear wall of the distribution chamber of the shower head's housing.
16. A shower head according to any of the foregoing claims, wherein the aerator is activatable and deactivatable.

17. A shower head according to any of the foregoing claims, wherein the surface (29) from which jets exit has at least two zones (A, B) and a selector (24) for switching between conducting water to the first zone (A) and conducting water to the second zone (B), where the selector (24) and the aerator, or air intake, are intercoupled such that the air intake will be switched from the activated state to the deactivated state or from the deactivated state to the activated state, or will change its activation state, when the selector is actuated.
18. A shower head according to claim 17, wherein the first zone (A) is part of the surface (29) from which jets exit and the second zone (B) covers the entire surface from which jets exit, including the first zone, where the first zone is centrally arranged on the surface from which jets exit.
19. A shower head according to claim 17 or claim 18, wherein operation of the air intake (38, 40) will be activated whenever the selector (24) is set to the second zone (B).
20. A shower head according to any of claims 17 - 19, wherein the selector (24) is manually actuatable, preferably actuatable by moving a component (12, 18) of the housing bearing the surface (29) from which jets exit relative to a component (13, 24) bearing the water inlet (33).
21. A shower head according to any of claims 17 - 20, wherein the zones (A, B) are connected to the water intake (14), or water inlet (33), in particular, are connected thereto over the full extents of the surface areas of both zones (A, B), via a distribution chamber (36), where the selector (24) preferably restricts the distribution chamber's coverage to the first zone (A) when set to the first zone (A), and that restriction of the coverage of the distribution chamber (36) will be eliminated when the selector is set to the second zone (B).

22. A shower head according to any of claims 17 - 21, wherein the selector has a cap that may be emplaced on the rear face (31) of the surface (29) from which jets exit and is intended for switching, and restricting the coverage of, the distribution chamber (36), where the system is preferably sealing and, in particular, abuts against the rear face of a wall (24) on the selector.
23. A shower head according to claim 22, wherein a seal, preferably a lip seal (32) abutting against a seat facing upstream, referenced to the direction of water flow, is provided for the purpose of sealing the system.
24. A shower head according to any of claims 17 - 23, wherein the surface from which jets exit is formed from a jet disk (29) fabricated from an elastic material, preferably an elastomer, in particular, one having a seal (32) formed on its rear face (31).
25. A shower head according to any of claims 17 - 24, wherein the water intake (14) on the shower head (11) is centered thereon, as is the air intake (38, 40), where the air intake preferably passes through a central aperture (40) in the surface from which jets exit.
26. A shower head according to claim 25 having an air intake that is connected to the surface (29) from which jets exit via a channel (38), where the selector (24) is connected to the water inlet (33), the surface from which jets exit is movable with respect to the water inlet for selection and activation purposes, and thereby causes a shutter (42) on the water inlet to open or shut the channel (38).
27. A shower head according to claim 26, wherein air from the channel (38) enters normal to the longitudinal axes of the water intake (14) and water inlet (33).

28. A shower head according to any of claims 17 - 27, wherein the water intake has numerous annular apertures (34) distributed about a centerline and air from the air intake (38, 40) enters immediately downstream from the apertures.
29. A shower head according to any of claims 17 - 28, wherein turbulence-generating devices (46) are provided, preferably in cascaded form, where, in particular, the turbulence-generating devices are arranged downstream from the air inlet (44), and are preferably distributed about a centerline or a channel (38) for inducting air through the air intake (40).
30. A shower head according to claim 29, wherein the turbulence-generating devices (46) are configured for deflecting and distributing incoming water to the zones (A, B) on the surface (29) from which jets exit, preferably for uniformly distributing water throughout the distribution chamber (36).
31. A shower head according to claim 25 or claim 26, wherein the channel (38) of the air intake (40) is tubular, attached to the front face of the shower head (11), and transits the center of the distribution chamber (36), where the turbulence-generating devices are formed on the channel's outer walls.
32. A shower head according to any of the foregoing claims that is configured in the form of a side-mounting shower head.

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